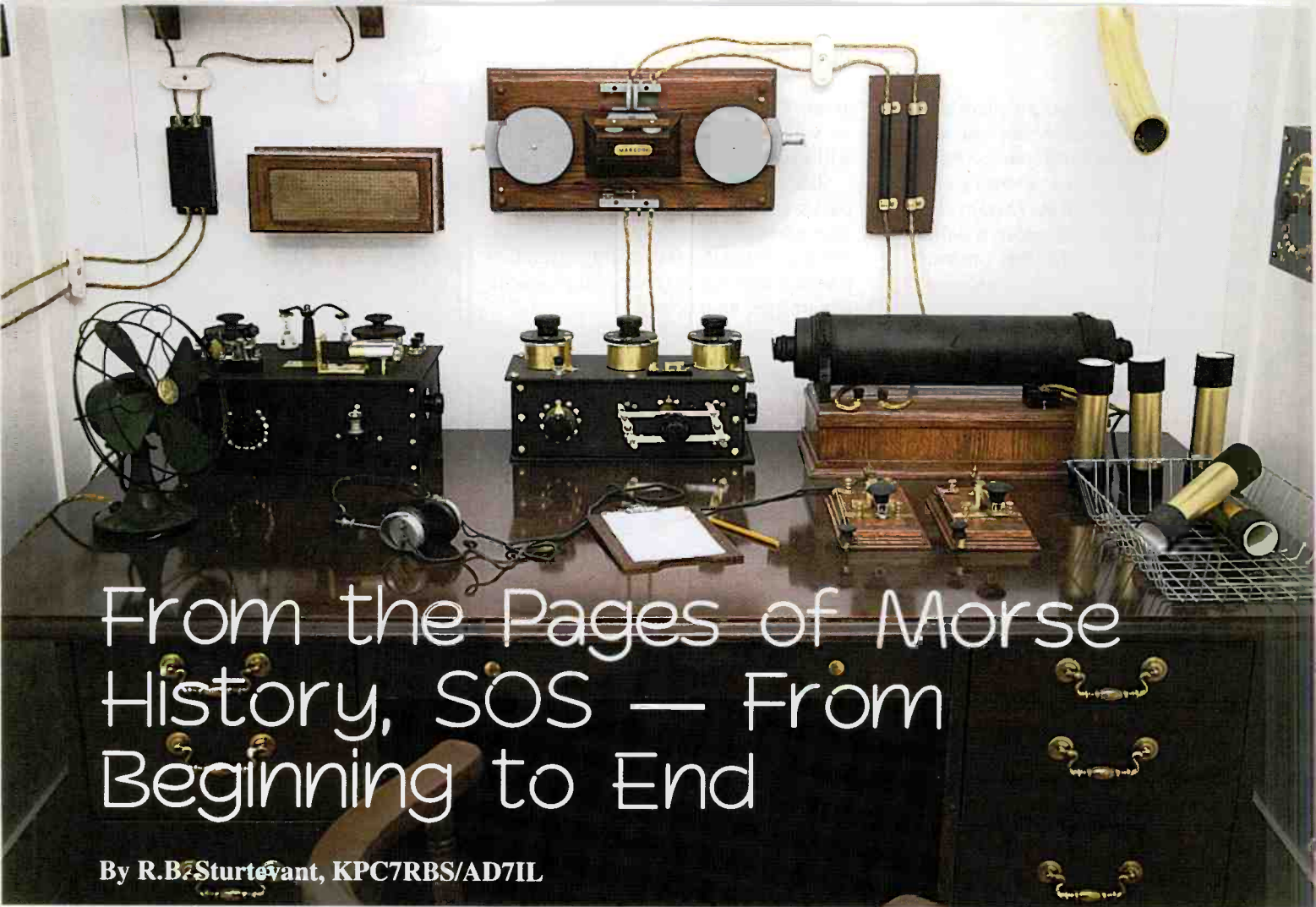




From the Pages of Morse History, SOS — From Beginning to End

By R.B. Sturtevant, KPC7RBS/AD7IL

So, who sent the first SOS and how did it become the “official” distress signal, anyway? **Photo A.**

As early as 1872, the Society of Telegraph Engineers discussed in its official journal the need for developing a system between ships and shore stations in time of emergency. At that time, ships were forced to rely on flags in daylight and cannons, bombs, rockets, whistles, or sirens at night or in fog.

Everyone acknowledged this was unsatisfactory because it was extremely short range and only called attention to the ship — failing to specify the nature of the emergency.

Radio history, as is often the case, is a little mushy. But the first ship to transmit an SOS distress call *appears to have been* the Cunard liner *Slavonia* on June 10, 1909, as reported in the September 1910 edition of *Modern Electrics*, **Photo B.**

The first *recorded* use of SOS as a distress signal was by the steamer *SS Arapahoe* on August 11, 1909. The signal was received at Hatteras, North Carolina by the United Wireless Telegraph Company and forwarded to the steamer company’s offices <<http://bit.ly/13szfU8>>.

As you’ll see, though, it was a long, arduous journey to reach international agreement on the use of SOS as the universally accepted distress call.

Hertz, Marconi, and an Atmosphere of Distress

In the late 1880’s, Heinrich Hertz demonstrated the ability to transmit and receive “Hertzian waves” over short distances.

Photo A. While the passenger liner *Titanic* was not the first ship to send a distress signal, it is certainly one of the most famous. The radio operators aboard sent both SOS and CQD, abiding by guidelines under both its British flag and Marconi Company. Pictured is a re-creation of the *Titanic*’s radio room. (Courtesy of Wikimedia Commons)

In 1891 *The Electrician* magazine predicted that Hertz’s discovery would lead to improvements in distress signaling. It is interesting to note that Marconi said no mention was ever made of the use of Hertzian waves in the scientific press until after his 1894 experiments. *Was that Marconi egotism or sloppy research?*

Marconi did arrange for the first ship-to-shore wireless demonstration between the South Foreland Lighthouse and the *East Goodwin* lightship — a distance of 12 miles. The experiment was a rousing success, **Photos C, D, E, and F.** It was a good thing, too. In the coming months there was real-life need for distress signaling, with the *East Goodwin* in the thick of things.

- In January 1899, heavy seas tore away part of the *East Goodwin*’s bulwarks in a storm. Wireless was used to notify Trinity House where the Marconi Company had its chief listening station.
- In March 1899 the use of radio for preserving life at sea occurred when the German ship *Elbe* ran aground

“The German government, in a frenzy of Teutonic efficiency, established its own procedures for making and answering maritime distress calls: SOS.”

on the Goodwin Sands in a dense fog. The *East Goodwin* lightship sent a message to summon the *Ramsgate* lifeboat.

- In April 1899 the first use of radio in a maritime collision was recorded when the steamship *Matthews* ran into the *East Goodwin* lightship, which called for lifeboats to rescue the passengers and crew of the *Matthews*.

On all these occasions, however, the *East Goodwin* simply called her regular shore station using routine procedures. Local records don't give much detail about these events — so much so that some historians believe they may have been Marconi publicity stunts and *never really happened*. More than 100 years later, as you can imagine, the truth is hard to come by.

- On January 1, 1901, the steamship *Princess Clementine* reported that a wooden bark named *Medora* was waterlogged and summoned assistance.
- On December 18, 1903 the steamship *Kroonland* of the Red Star Line became disabled and used her radio to contact Crookhaven Shore Station.

But *still* nobody had established procedures for making distress calls. The calls for help were handled as routine radio traffic.

On January 7, 1904, the Marconi Company, which was supplying shipping companies with both equipment and operators, issued *Circular No. 57*, stipulating that ships in distress and requiring assistance of any kind would use the distress call *CQD* to set their message apart from regular traffic. *CQ* was the Marconi Company's call for “All Stations Attention.” Adding the *D* simply meant it was a “Distress All Call,” and needed the ship captain's authorization before being transmitted.

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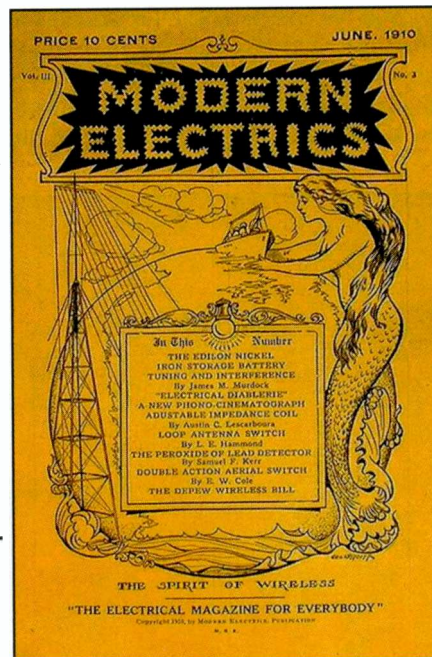
The ship in distress would send in Morse *di-di-dit-dah-dah-di-di-dit*. That's *SOS*, with no breaks between the letters. It would be repeated until a shore station sent out a long dash — *dahhhhhhhhhhh* — which meant all stations should stop sending. Primitive equipment being used at the time could jam the signal of the ship in distress.

The shore station would then send an emergency inquiry, *di-di-dit-dah-dah-dah-dit*. That's *SOE*, again with no breaks between letters. The ship calling in the distress would then answer *HIER* (here) followed by its callsign or the ship's name. (NOTE: Many ships at this time were not assigned callsigns. — KPC7RBS)

Included in the message, as well, would be the nature of the emergency, assistance requested, and the ship's location. The shore station would then direct nearby ships or shore facilities in giving aid to the stricken vessel. All other stations were expected to stay off the air until the emergency was over. This was established by the Berlin Radiotelegraph Convention of

Photo B. *Modern Electrics*, published by Hugo Gernsback from August 1908 to December 1913, announced in its September 1910 edition that an *SOS* was sent by the Cunard liner *Slavonia* on June 10, 1909 — appearing to be the first occurrence of the distress call's use.

(Courtesy of Wikimedia Commons)



1906, but was binding only on German flagships. Marconi operators continued using *CQD* — just as before.

In 1912 the London Radiotelegraphic Convention adopted the German *SOS* as the standard for all international distress calls. The reason is interesting:

Ships were required to carry only one radio operator who could not be expected to stand watch 24 hours a day for the duration of the voyage. *SOS* was distinctive enough that, when sent repeatedly, a semi-trained crew member could be expected to hear it, recognize its importance, and summon the radio operator to answer the call. This convention also set the official international call for attention without distress as *CQ*.

For many years to come, both *CQD* and *SOS* distress signals were picked up by intrepid radio monitors. In fact, when the *Titanic* tragically hit an iceberg, both *SOS* and *CQD* were sent because the operators were on a British ship but working for the Marconi Company. As the Marconi Company lost much of its prominence, so did *CQD*. Ultimately, it was dropped altogether.

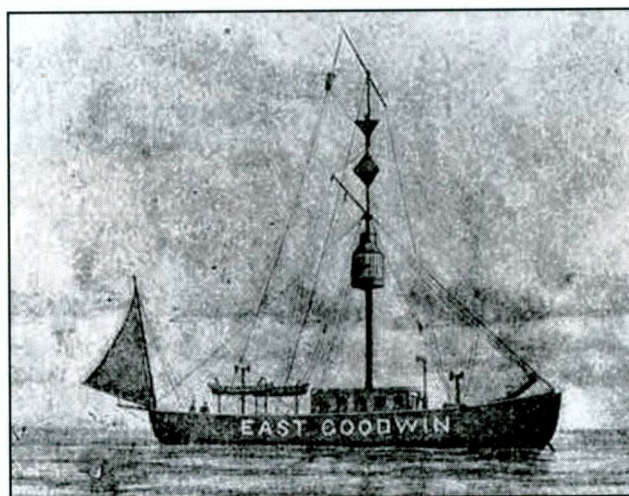


Photo C. *East Goodwin* lightship was called to duty during Marconi's experiments with sending distress signals from vessels at sea. (Courtesy of Marconi Corporation)

SOS became the sole international distress call, and probably the only Morse signal that most people knew. Ultimately, though, Morse began to be overshadowed by single sideband, microwave, satellite

uplinks, data transmissions, and a host of other modes of communication.

So the Morse *SOS* simply wasn't being used by much of anyone anywhere. But with *SOS* still on the books as an accept-

ed distress call, all maritime operators had to be able to send and receive in Morse.

With limited-to-no use, it was decided that *SOS* would be dropped as a distress call. The moment set for its official demise was midnight GMT on January 1, 1998. Forty-five minutes before midnight, a Morse distress signal was picked up by the British Coast Guard station at Falmouth.

The message was originally thought to be an "end of the era" hoax. But, indeed, the ship *MV Oak* was in distress 790 miles west of Ireland while sailing from Canada to Liverpool.

Upon arrival at the ship's location, the Coast Guard found the 13,000-ton, Bahamas-registered ship had been hit by storm-force winds, the cargo of wood had shifted and the vessel had been without power since the day before.

MV Oak had a 40-degree list and the captain and crew had taken to lifeboats and were awaiting rescue.

It was no hoax, but it was the last official maritime *SOS* signal sent by a vessel in distress.

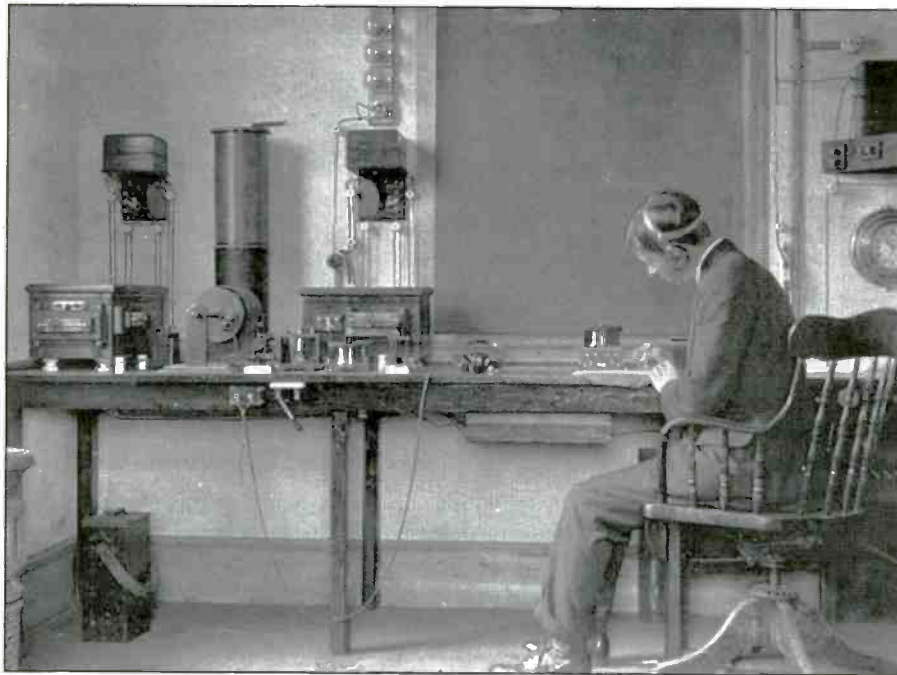


Photo D. Donald Manson, an employee of the Marconi Company, sits at the South Foreland Light House radio operating position in a picture showing the type of equipment used at the time of Marconi's distress signal tests. (Courtesy of Marconi Corporation)



Photo E. The South Foreland Light House sits majestically above the White Cliffs of Dover. (Courtesy of Wikimedia Commons)



Photo F. This wireless station is similar to the one aboard the *East Goodwin* lightship, which is believed to have been the first vessel to have wireless permanently installed onboard. (Courtesy of Marconi Company)